

scanning said incident laser under the control of a computer over said predetermined location to determine a presence or absence of an analyte at said location using said tracking control information.

89. The method of claim ⁸⁸ wherein a plurality of analyte binding elements are provided in a spatially addressable pattern.

90. The method of claim ⁸⁹ wherein address information is encoded in said disc which is used in the scanning of said incident laser to address a location to be scanned.

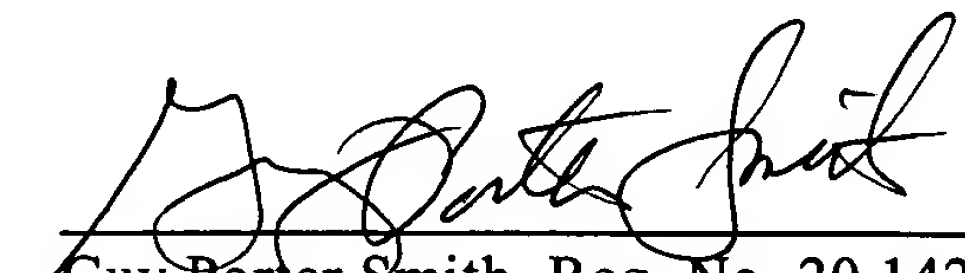
REMARKS

It is requested that this Preliminary Amendment be entered before the examination of the within application.

Any additional fees which are required in connection with this communication and which are not specifically provided for herewith are authorized to be charged to deposit account no. 16-2230. Any overpayments are also authorized to be credited to this account.

Respectfully submitted,

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Marked Up Copy of Specification to Show Changes

Figure [5A] 5 is a schematic representation of the chemical structure of an exemplary cleavable spacer molecule of the cleavable reflective signal element of this invention, subsequent to its attachment to the derivatized plastic substrate surface of the assay device but prior to derivatization with oligonucleotide side members, in which piv denotes a pivaloyl protective group, MMT denotes monomethoxytrityl, and n and m each independently represents an integer greater than or equal to one;

Ia: 5' -CGGGTGTGG	Ib: CGGCCGCGG-3'
IIa: 5' -CGGGTGTGA	IIb: CGGCCGCGG-3'
IIIa: 5' -CGGGTGTGC	IIIb: CGGCCGCGG-3'
IVa: 5' -CGGGTGTGT	IVb: CGGCCGCGG-3']
<u>Ia: 5' -CGGGTGTGG (SEQ. ID. NO. 1)</u>	<u>Ib: CGGCCGCGG-3' (SEQ. ID. NO. 5)</u>
<u>IIa: 5' -CGGGTGTGA (SEQ. ID. NO. 2)</u>	<u>IIb: CGGCCGCGG-3' (SEQ. ID. NO. 5)</u>
<u>IIIa: 5' -CGGGTGTGC (SEQ. ID. NO. 3)</u>	<u>IIIb: CGGCCGCGG-3' (SEQ. ID. NO. 5)</u>
<u>IVa: 5' -CGGGTGTGT (SEQ. ID. NO. 4)</u>	<u>IVb: CGGCCGCGG-3' (SEQ. ID. NO. 5)</u>

A test sample containing 5' -GCCCACACCGCCGGCGCC-3' (SEQ. ID. NO. 6) is prepared and allowed to contact the cleavable signal element at a temperature that approximates the T_m of the side members Ia and Ib. The temperature of the sample solution is heated to about 20 degrees Centigrade above the T_m . Subsequently, the signal element is treated with 0.1M sodium fluoride solution and washed. Spacer molecules remaining attached to the surface signal the presence of, and tethering by, 5' -GCCCACACCGCCGGCGCC-3' (SEQ. ID. NO. 6).

The foregoing process is applied to the analysis of 5'GCCCACACTGCCGGCGCC-3' (SEQ. ID. NO. 7), [5-GCCCACACGGCCGGCGCC-3'] 5'-GCCCACACGGCCGGCGCC-3' (SEQ. ID. NO. 8) and 5' -GCCCACAGCCGGCGCC-3' (SEQ. ID. NO. 9), using, respectively, spacer molecules incorporating side members IIa and IIb, IIIa and IIIb, and IVa and IVb.

Primer 1: 5' -TGA GAC ACC AGG AAT TAG ATA TCA GTA CAA TGT-3' (SEQ. ID. NO. 10)

Primer 2: 5' -CTA AAT CAG ATC CTA CAT ATA AGT CAT CCA TGT-3' (SEQ. ID. NO. 11)

Cleavable spacers with siloxane moiety are synthesized and attached in a uniform density to a derivatized 120 mm polycarbonate disk substrate essentially as set forth in sections 5.2 and 5.3 hereinabove. The following side members are then stamped on the cleavable spacers:

first side member: 5' -TAG ATA TCA GTA CAA-3' (SEQ. ID. NO. 12)

second side member: 3' -TAT TCA GTA GGT ACA-5' (SEQ. ID. NO. 13)